

DESCRIPTION

The 2HBHD Series is designed for use in high mounting height applications where periodic cleaning with high pressure is required. This surface mounted luminaire with optional chain or stem mount pendant available, has a hole-free design and is enclosed and gasketed to protect against infiltration of particles and airborne bacteria. The sealed housing and door frame allow relamping without contamination of the clean areas. These luminaires are U.L. listed and C.S.A. certified for wet locations and are manufactured in accordance with U.S.D.A., F.D.A., N.S.F. and Federal Standard 209E. **800 PSI hosedown rating is standard.**

Catalog #		Type
Project		
Comments		Date
Prepared by		

2HBHD's high lumen package allows the benefits of fluorescent to be applied at high mounting heights that were traditionally exclusive to H.I.D. The primary benefits include exceptional color rendering, high system efficacy, 95% lumen maintenance, long lamp life, instant on/instant re-strike, economical dimming, and uniform brightness control. Applications include clean rooms, technical and biomedical labs, food processing/testing centers and pharmaceutical labs.

SPECIFICATION FEATURES

A...Lens

One-piece, clear extruded lens with internal prism pattern. Choice of prismatic acrylic or clear acrylic.

B...Fasteners

Flush mounted, stainless steel machine screws secure through captive cage nuts in housing and are evenly spaced to compress gasketing on all sides.

C...Housing

Die-formed, 20 ga. CRS housing with seam welded and sealed end caps. Contains no exposed holes that would allow air or moisture passage. Standard white high reflectance polyester powder coat finish. Gloss: 85%; Reflectance: 93%; Hardness: 2H; Salt Spray: 500 Hours. Optional brushed stainless steel finish for corrosive chemical environments.

D...Optics

Die formed reflectors are faceted for 4 and 6 lamp configurations with two optical distributions – medium and wide. Medium beam optics utilizes 95% specular Miro 4 substrate while the wide distribution utilizes a high performance 95% reflective polyester powder coated finish.

E...Lens Retention

Unique, Particulock™ lens retention system utilizes continuous, 18 ga. media clampdowns to sandwich gasketing and integrate lens and door frame for even environmental seal.

F...Hinge

Two braided, stainless steel cables on one side of door provide hinging.

G...Door/Shielding

(Must be specified.) One-piece, 18 ga., fully gasketed, outside door with die-formed and beveled edges eliminates seams which could entrap microscopic contaminants.

H...Ballast

Standard, Class P, CBM/ETL ballast.

I...Gasket

White, closed cell, Flexiseal™ gasketing surrounds perimeter of lens to seal lens to door frame and around perimeter of door to seal door to housing. Another layer seals fixture to ceiling system after installation.

J...Access (surface mount only)

A gasketed access plate on top of the housing with two 7/8" diameter knockouts allows connection of vapor tight conduit fitting.

K...Mounting

Standard surface mount with gasket between surface and fixture housing. Optional chain or stem mounting. Pendant fixture comes with gasketed access plate as standard with grommeted cord or cord & plug. Pendant hardware ordered separately.

Labels

U.L. listed, C.S.A. certified, standard wet label. 800 PSI hosedown rating is standard.



F-BAY 2HBHD SERIES

2' x 4' Hosedown
Fluorescent High-Bay
4 or 6 Lamp

FLUORESCENT SURFACE
ONE-PIECE DOOR
T5 LAMP TECHNOLOGY
T8 LAMP TECHNOLOGY



ENERGY DATA

Input Watts:

EB Ballasts

432 = 109W

632 = 167W

EB/Plus Ballasts

432 = 147W

632 = 221W

ER Ballasts

432 = 112W

632 = 169W

ER/Plus Ballasts

432 = 144W

632 = 218W

Luminaire Efficacy Rating

LER = 75

Catalog Number: 2HBHD-632-CL

Yearly Cost of 1000 Lumens,
3000 hrs. at .08 KWH = \$3.22

* Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements

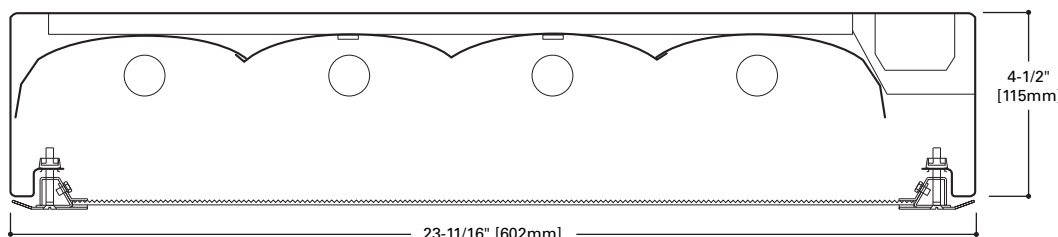
** Consult Pre Sales Technical Support.

LAMPS CONTAIN MERCURY. DISPOSE ACCORDING TO LOCAL, STATE OR FEDERAL LAWS

LINEAR DISCONNECT

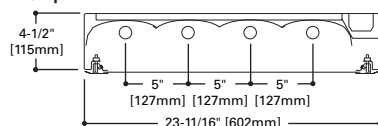
Safe and convenient means of disconnecting power.

ADF042010

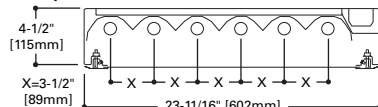


LAMP CONFIGURATIONS

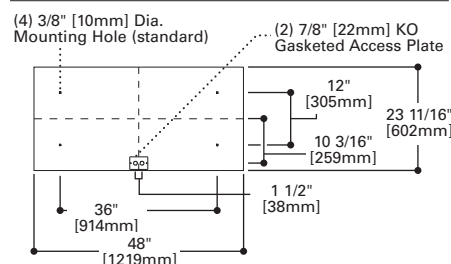
4-lamp



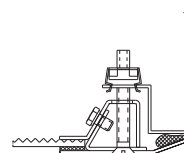
6-lamp



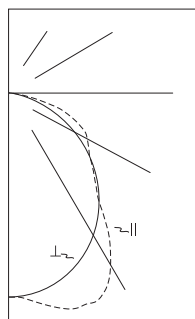
MOUNTING DIMENSIONS



DOOR FRAME



PHOTOMETRICS



2HBHD-632-CL
 (2) Electronic Ballasts
 (6) F32T8/TL835 lamps
 3000 lumens
 Spacing criterion:
 (H) 1.2 x mounting height, (L) 1.2 x mounting height
 Efficiency 68.1%
 Test Report:
 2HBHD632CL.IES
 LER =75
 Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = \$3.22

Candela

Angle	Along H	45°	Across L
0	4538	4538	4538
5	4601	4543	4510
10	4787	4628	4442
15	4969	4705	4319
20	4999	4740	4160
25	4938	4685	3958
30	4514	4559	3711
35	3882	4262	3434
40	3100	3739	3121
45	2696	3118	2782
50	2392	2414	2420
55	2169	1992	2035
60	2008	1643	1638
65	1762	1377	1235
70	1400	1131	843
75	875	772	485
80	355	360	211
85	77	76	48
90	0	0	0

Coefficients of Utilization

Effective floor cavity reflectance																20%										
rc	80%								70%				50%				30%				10%				0%	
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	81	81	81	81	79	79	79	79	76	76	76	72	72	72	69	69	69	68								
1	75	72	69	66	73	70	68	65	67	65	63	65	63	61	62	61	60	58								
2	68	63	58	55	66	62	58	54	59	56	53	57	54	52	55	53	51	49								
3	62	56	50	46	61	54	50	46	52	48	45	51	47	44	49	46	43	42								
4	57	49	44	39	56	49	43	39	47	42	38	45	41	38	44	40	37	36								
5	53	44	38	34	51	44	38	34	42	37	34	41	37	33	40	36	33	31								
6	49	40	34	30	48	39	34	30	38	33	30	37	33	29	36	32	29	28								
7	45	36	31	27	44	36	30	26	35	30	26	34	29	26	33	29	26	25								
8	42	33	28	24	41	33	27	24	32	27	24	31	27	23	30	26	23	22								
9	40	31	25	21	39	30	25	21	29	25	21	29	24	21	28	24	21	20								
10	37	28	23	19	36	28	23	19	27	23	19	27	22	19	26	22	19	18								

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	3768	20.9	30.7
0-40	6124	34.0	50.0
0-60	10121	56.2	82.6
0-90	12258	68.1	91.5
0-180	12258	68.1	100.0

Typical VCP Percentages

Room Size (Ft.)	Height Along		Height Across	
	8.5'	10.0'	8.5'	10.0'
20 x 20	35	43	41	46
30 x 30	33	34	39	40
30 x 60	35	33	40	39
60 x 30	39	39	43	42
60 x 60	40	36	43	40

ORDERING INFORMATION

SAMPLE NUMBER: 2HBHD-654T5-A-UNV-EBT2

Width 2=24"	Series HBHD=High Bay Hose Down	No. of Lamps 4=4 Lamps 6=6 Lamps	Lamp Type 32=32W T8 Lamps (48") 28T5=28W T5 Lamps (48") 54T5=54W T5HO Lamps (48")	Distribution Blank=Medium (Specular Aluminum) G=Wide (High Reflectance White)	Shielding A=Prismatic Acrylic Lens & Aluminum Doorframe CL=Clear Acrylic Lens & Aluminum Doorframe	Voltage ⁽¹⁾ UNV=Universal 120/277 Voltage UNC=Universal 347/480 Voltage (T5 linear only) ⁽²⁾ 120V=120 Volt 277V=277 Volt 347V=347 Volt	Options Lamps Installed L8830=T8 Lamp, 80CRI 3000K L8835=T8 Lamp, 80CRI 3500K L8841=T8 Lamp, 80CRI 4100K L8850=T8 Lamp, 80CRI 5000K L5830=T5 Lamp, 80CRI 3000K L5835=T5 Lamp, 80CRI 3500K L5841=T5 Lamp, 80CRI 4100K L5850=T5 Lamp, 80CRI 5000K GL=Single Element Fuse GM=Double Element Fuse Emergency=EM Installed	Ballast Type ⁽¹⁾ T8 Systems EB8_=T8 Electronic Instant Start. Total Harmonic Distortion < 10% No. of Ballast 1 or 2 EB8_/PLUS=T8 Electronic Instant Start. High Ballast Factor >1.13. Total Harmonic Distortion < 20% No. of Ballast 1 or 2 ER8_=T8 Electronic Program Rapid Start. Total Harmonic Distortion < 10% No. of Ballast 1 or 2 ER8_/PLUS=T8 Electronic Program Start. High Ballast Factor >1.13. Total Harmonic Distortion < 10% No. of Ballast 1 or 2 T5 Systems EBT_=T5 Linear Electronic Program Rapid Start Total Harmonic Distortion < 10% No. of Ballast 1, 2 or 3 EHT_=T5 Linear Electronic Start High Ambient. ⁽²⁾ Total Harmonic Distortion < 10% No. of Ballast 1, 2 or 3 DIM=Dimming	Options C3=3' Power Cord ⁽³⁾ C6=6' Power Cord ⁽³⁾ PC3=3' Power Cord & Plug (Specify Voltage) ^{(1),(3)} PC6=6' Power Cord & Plug (Specify Voltage) ^{(1),(3)} SSF304=Stainless Steel Housing and Frame, 304 Finish Accessories (order separately) EHK=Suspension Mounting Kit (Chain/Grippler not included) ⁽⁴⁾ HB-SPS= Single Point Cable kit SCA-48= Stem Set Adjustable 48" length ⁽⁵⁾ SCF= Stem Set Fixed (Specify length) ⁽⁵⁾ CSC= Stem Set 45° Swivel (Specify length) ⁽⁵⁾	Packaging U=Unit Pack PAL=Pallet Pack PALC=Job Pack In Carton
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NOTES: ⁽¹⁾Voltage must be specified when ordered with plugs, motion or emergency ballasts. ⁽²⁾2 lamp ballast configurations only in UNC versions. ⁽³⁾Cord or cord & plug options only available with pendant mount fixtures. ⁽⁴⁾Chain or gripper for EHK must be ordered separately. See mounting. ⁽⁵⁾See accessories for ordering information on stem sets.